





ELECTRONIC ENVIRONMENTAL DRINKING WATER REPORTING (E2-DWR) SYSTEM

USER'S MANUAL

Prepared forRhode Island Department of Health

June 12, 2007



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1 Introduction

1.1 Electronic Environmental Reporting and the E2 System

The Rhode Island Electronic Environmental reporting system (E2) is a web-based information system that allows the regulated community to electronically submit reports to the Department of Health (RIDOH).

The E2 system provides an alternative to submitting hand-written or paper-based reports that is faster, more efficient, and requires less processing for labs and the RIDOH. As a fully operational electronic reporting system, all of the necessary legal, security, and electronic signature functionalities have been included to serve as a completely paperless reporting system.

Currently, the E2 system allows laboratories to submit two major categories of reports:

- Electronic Drinking Water Reports (DWR)
- Electronic Private Well Testing Act (PWTA) Reports

Currently, the E2 system allows water systems to view electronic Drinking Water Reports (DWR) containing analytical results submitted by laboratories on behalf of the water system.

1.2 Reasons for and Benefits of Electronic Reporting with E2

Electronic reporting provides the following benefits:

- Gives the user greater control over the quality of data flow.
- Reduces reporting costs by offering a streamlined reporting method using readily available computer tools.
- Offers on-line availability of reports and their processing status.
- Improves reported data integrity and security.
- Saves the RIDOH costs by reducing, and better utilizing resources required for managing reports.
- Adds to the overall effectiveness of the RIDOH program areas with faster response for data analyses, compliance assessment, and decision-making.
- Allows for behind-the-scenes evaluations (informal data audits) of laboratory data submissions with respect to laboratories approved for certification, effective certification dates to analyze for specified parameters, using specified methods and techniques.

1.3 Contact Information

The E2 Coordinator can be reached at:

ciica at.			
DWR			
E2 Coordinator			
Rhode Island DOH			
waterdatahelp@health.ri.gov			
mailto:			
Phone: (401) 222-7622			



1.4 E2 System Overview

As a web-enabled system, Laboratories and Water Systems can access the E2 system at minimal cost using existing Internet access. The E2 system provides Water Systems with the following capabilities with respect to Laboratories:

- Ability to specify which laboratories can submit analytical reports. E2 allows water systems to specify which laboratories can submit analytical reports on their behalf.
- **Ability to view laboratory analytical reports.** E2 allows water systems to view laboratory analytical reports that have been submitted on their behalf. In addition, the processing status of each sample / result can be viewed.

The E2 system provides Laboratories with the following capabilities:

- Ability to submit original or revised laboratory reports. E2 allows laboratories to either fill out the reports online, upload report submissions, or copy-and-paste reports from a laboratory's local spreadsheet program.
- **Ability to view validation messages online.** All submissions can be validated to verify that they meet minimum validation criteria. Meaningful validation messages help pinpoint reporting errors so they can be corrected and resubmitted.
- **Ability to save partially completed reports.** If a user does not finish filling out a report in one session, he or she can save the report and resume filling it out at a later time. DOH will not review partially completed reports. The user must submit the report in order for the data to be processed by DOH.
- **Ability to view and print previously submitted reports.** All submissions made through the E2 reporting system are saved for later retrieval.
- Ability to monitor the status of all submissions. Users can log in to see the current processing status of all submissions (Pending, Processed, and Rejected). Users also receive an email notification of the submission status. In addition, program specific processing statuses can be tracked.

In essence, the E2 system serves as an electronic filing cabinet, allowing Water Systems to manage their own reporting to RIDOH and monitor the status of past report submissions.

In order to provide sufficient security for all submitted information, access to the E2 system is restricted in the following ways:

- Any person that wants to have access to the E2 system must have an authorized RIDOH Online account.
- Any Laboratory that wants to submit reports for a particular Water System must request and be granted an association with the Water System if the Water System doesn't allow everyone to submit reports for them.



2 Minimum System Requirements

Laboratories and Water Systems must be able to access RIDOH's E2 website through the Internet and have an active e-mail account to receive system messages. Typically, such access is available either through a dedicated connection (i.e.: local area network) or a modem connection to an Internet Service Provider.

To ensure that all of the features of the Department's E2 system are available, a Laboratory must use Microsoft Internet Explorer web browser (version 6.0 or higher) and Adobe Reader (version 5.0 or higher). The performance of the E2 system will vary based on the computer's internet connection speed, CPU, Operating System, and available memory. RIDOH recommends the following system configuration:

- Broadband Internet Connection
- Pentium II processor or higher
- Microsoft Windows 2000 or higher
- 256 MB of RAM or higher
- Microsoft Internet Explorer 6.0 or higher

3 E2-DWR System Description

As with a regular paper and computer program cabinet, the E2-DWR electronic filing cabinet is surrounded by a number of procedures that guarantee that the available information is up-to-date and accurate. Information must be categorized and placed in the correct places. Keys to the locked drawers must be distributed to the appropriate people. Some files must pass across a number of desks to get signed off. A typical E2-DWR submission performed by a laboratory is provided below:

3.1 Abbreviated E2-DWR Submission Process:

Laboratory:

- **Step 1:** Laboratory User logs into the E2 Reporting System via the Internet with user ID and password.
- **Step 2:** Using the Laboratory > Create a New Report screen, the user selects a laboratory under the "Safe Drinking Water Reports" section.
- **Step 3:** The user previews and prepares e-DWR XML file in accordance with reporting requirements using one of three methods.
 - Step 3A: Downloading an XML template file and generating their own submission file
 - Step 3B: Completing the online entry web form and generating a submission file. The file may be saved locally for later submission.
 - Step 3C: Copying and pasting data into the online web form and generating a submission file. The file may be saved locally for later submission.
 - Step 3D: Using the Microsoft Excel Template to generate an XML file for upload.
- **Step 4:** Certify the data entered.
- **Step 5:** The Server receives the file, and issues a receipt of confirmation to the user on the screen. A separate receipt confirmation email will be automatically sent to the user. The Server verifies that the e-DWR XML file conforms to very specific data validation rules and business requirements stored in the Server. If it does, the submission is noted as such on the Server for reference. If not, the submission will be noted as 'rejected' and the user will be notified via email. The user must cure the problems and submit revisions to the E2-DWR Server. In any case, an email is sent to the certifier stating the status of the submitted DWR.
- **Step 6:** Valid DWR submissions can be viewed and printed at any time.



3.2 Abbreviated E2-PWTA Submission Process:

- **Step 1:** Laboratory User logs into the E2 Reporting System via the Internet with user ID and password.
- **Step 2:** Using the Laboratory > Create New Reports screen, the user selects a laboratory under the PWTA report type heading.
- **Step 3:** The user previews and prepares e-PWTA XML file in accordance with reporting requirements, as specified in the "RIDOH PWTA XML Transmission Protocol" using one of three methods.
 - Option A (Online Forms): Click the "Entry" link to begin filling out the PWTA report using a series of online entry forms.
 - Option B (Excel): Click the "Excel" link to download an Excel template. Use this template to fill out PWTA report and click "Generate XML" button from within Excel file to generate XML submission file. Then go to "Upload XML Reports" menu option in E2 to upload the XML file.
 - Option C (XML): Click the "XML" link to download an XML template. Use this file to generate a submission file in XML format. Then go to "Upload XML Reports" menu option in E2 to upload the XML file.
- **Step 4:** Certify the data entered by supplying your PIN (only provided to Lab certifiers) and click to submit the report to the DOH.
- **Step 5:** The Server receives the file, and issues a receipt of confirmation to the user on the screen. A separate receipt confirmation email will be automatically sent to the user. The Server verifies that the e-PWTA XML file conforms to specific data validation rules and business requirements. If it passes validation, the submission is noted as such on the Server for reference. If not, the submission will be noted as 'rejected'. The user is notified via email of validation status. If the submission is rejected, the user must fix the errors and resubmit the file to the E2-PWTA Server.
- **Step 6:** All past PWTA submissions made through E2 can be viewed and printed at any time at the "View Submission" menu option.



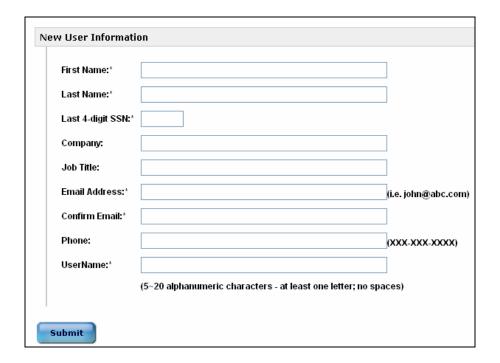
4 Getting Started

4.1 Creating a User Account

In order to gain access to the E2 Reporting System, a User Account must first be created. If the user does not already have an account, one can be created clicking the 'New to the system?' link.



This will display the user registration page shown below.

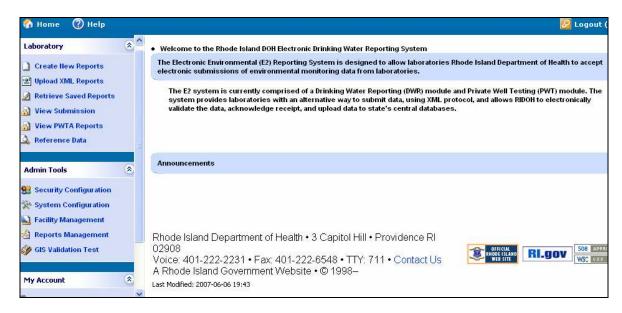


Required fields are followed by an asterisk. Once all required fields are filled out with valid data the user can click the submit button to create an account. The account will be created in the system and the username and password will be emailed to the address given on the registration page. With this User Account, a user can now login to the E2 Reporting System.

4.2 Rhode Island E2-DWR Website Login

After entering a valid username and password at the login page, the user is brought to the E2 Home page, which provides a brief description of the system, and highlights any announcements created by the administrator.

Note: If this is the first time you have entered the E2 Reporting System, only the "My Account" menu will be available on the left hand Navigation Panel.



Before proceeding, we will be taking a closer look at the layout of the application as a whole, starting with the status bar.



The status bar is intended to provide quick access to the current module, user information, and general system functions.

- Towards the left part of the status bar, the Home icon allows the user to return to the DWR module default page.
- The user can access online help by clicking on this icon.
- Conce finished using the E2 Reporting System, the user may log out using the logout icon.

To continue on with the layout of the application, the function bar is located in the frame to the left of the main area of the screen. Each functional area is highlighted below.

Under <u>Laboratory</u> are the following topics:

- Create New Reports icon leads to the heart of the E2-DWR System. Up to date reports can be viewed, printed, and downloaded here. Also, web forms can be used to enter and submit data. Much of this document will focus on this functional area.
- Upload XML Reports

 By clicking on the Upload XML Reports icon, a user can select and upload a DWR or a PWTA file in XML format that has been generated in compliance with the e-DWR schema. Before submission, the files can be tested for completeness and compliance with the e-DWR schema.
- By clicking on the Retrieve Saved Reports icon, a user can make changes to, or delete a saved report.
- <u>View Submission</u> DWR and PWTA files that have been submitted can be viewed and downloaded by clicking on View Submission. Submissions can be viewed and searched by laboratory and submission date.
- <u>View PWTA Reports</u> PWTA files that have been processed or resubmitted can be viewed by clicking View PWTA Reports. Submissions can be viewed and searched by laboratory, submission date, county, and municipality. They cannot be downloaded.
- Reference Data Laboratories can find information regarding water systems, including details of the facility and information pertaining to the Safe Drinking Water reports submitted by the facility by clicking on this icon. In addition, the method and parameter reference data is provided.

Under My Account are the following topics:

- Basic Information

 The user's account information can be seen by clicking on Basic Information.
- Manage PIII The user can request a new PIN after clicking on this icon.
- Associated Laboratory Associated Laboratory functions include actions such as viewing the laboratories that the user is associated with, the user's role in reference to that laboratory, and specific laboratory information such as address and E2 Reporting System participation status.



4.3 My Account

The "My Account" section provides three important links. The function of these links is provided in the following subsections.

4.3.1 Basic Information

Select the Basic Information icon (Basic Information) to view your E2 account information. This will provide a link to the following page

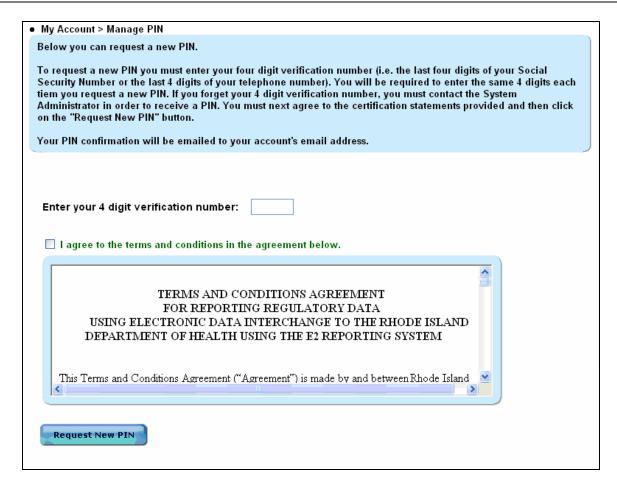


The information can be updated by the E2 Admin.

4.3.2 Manage PIN

A PIN serves as your electronic signature, which allows you to certify the laboratory results that are submitted. It is used **in addition to** the password that you are issued. A user can request a new PIN by selecting the Manage PIN icon, Manage PIN.



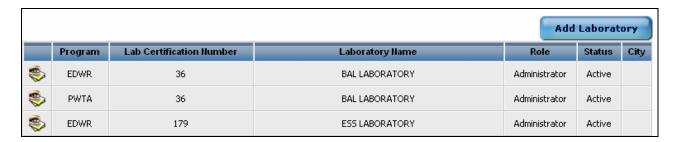


The user must enter their four digit verification number (last 4 digits of their social security #) and agree to the terms and conditions stipulated on the screen. The new PIN will be sent to the user's email address. If a user has lost their PIN they will need to contact the system administrator.

4.3.3 Associated Laboratory

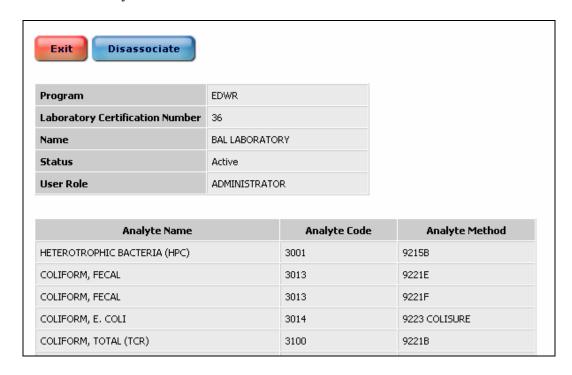
In order to view Laboratory Reports submitted for a water system or to prepare and/or submit Laboratory Reports, a user must first be associated with a laboratory. The user can access the Associated Laboratory icon, Associated Laboratory to view the listing of laboratories with which they are currently associated, or to request an association with a lab.

The first screen that is displayed lists the laboratories that the user is currently associated with.



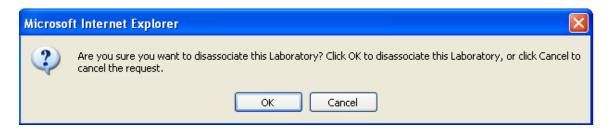


To obtain further information about a laboratory, click on the View icon . This will display a screen called Laboratory Detail.

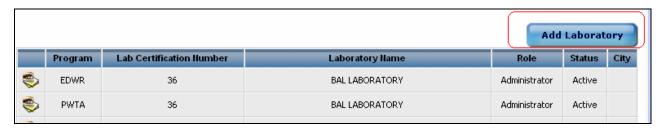


In addition to showing the Certification Number of a lab, this Details screen also shows which Analyte/Method pairs the lab is allowed to report on.

To remove association with a particular laboratory, the user can select the Disassociate button, which will prompt the following window.

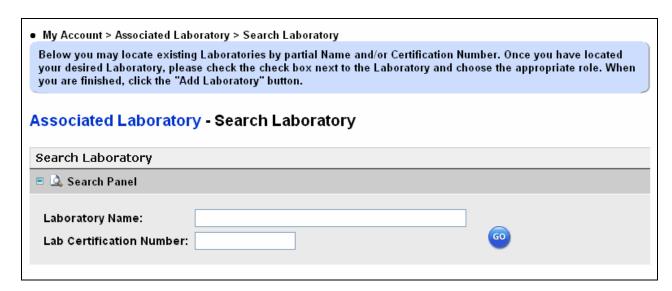


To request to be associated to a laboratory, click the Add Laboratory button from the Associated Laboratory page.



This will bring the user to a laboratory search screen.





Enter the search criteria and press the Go button. Search results will be displayed below the search panel. To add a laboratory make the appropriate selection in the search results list by clicking on the empty box to the desired laboratory, and selecting the role in which the user will play within the selected laboratory (Administrator, Certifier, or Preparer) then click the "Add Laboratory" button. These roles are defined as follows:

Administrator:

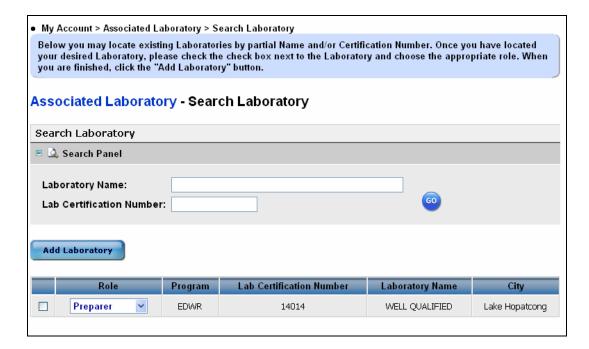
- Allowed to download, prepare, upload, review, and certify the accuracy of electronic reports.
- Allowed to submit electronic reports to the state agency.
- o If the user's account is associated with a laboratory the user will have the following additional privilege:
 - Allowed to approve or deny requests from others requesting to be associated with the laboratory.

Certifier

- Allowed to download, prepare, upload, review, and certify the accuracy of electronic reports.
- o Allowed to submit electronic reports to the state agency.
- o If the user's account is associated with a water system the user will be allowed to view laboratory reports submitted on behalf of the water system.

• Preparer:

- Allowed to download and prepare electronic reports.
- Allowed to view electronic reports and past submissions, but not certify or upload any submissions.
- o If the user's account is associated with a water system the user will be allowed to view laboratory reports submitted on behalf of the water system.

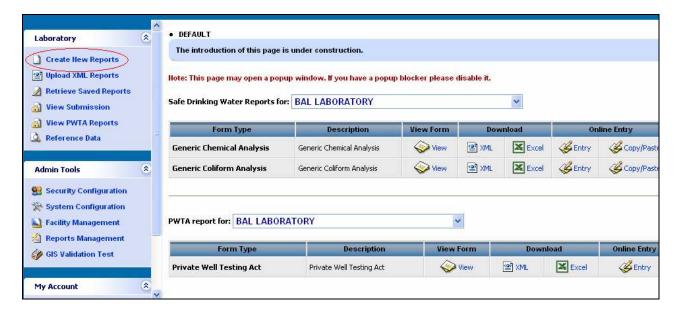


Before the association is made, it must be approved by an administrator. The administrator will receive a system generated email informing them that a user has requested an association with a lab. The administrator will subsequently change the status of the request from pending to either active or rejected. Another system generated email will then be sent to the user informing them of the status of their association with the laboratory.

5 eDWR Reporting (Public Drinking Water Reports)

Once a user has been associated with a laboratory, the user can then begin to submit laboratory reports. To perform any reporting task, first click on the "Create New Reports" link in the functional area to the left, this will allow the user the following options:

- View a blank form (template)
- Download a template file (XML or Excel)
- o Fill out an online form (Online webpage entry or Copy/Paste from Excel)



There are two possible programs that the user can be associated with for each laboratory. These programs are: Safe Drinking Water Reports and PWTA. If a user is associated with both programs this screen is partitioned into two sections. To obtain a particular report the user must first go the section of the page pertaining to the desired program (Safe Drinking Water or PWTA) reports, and then select a laboratory using the drop-down associated with the appropriate report type.

5.1 Creating New Safe Drinking Water Reports

In an effort to streamline laboratory data reporting, RIDOH has consolidated the various paper DW reports into 2 different online forms for Safe Drinking Water reporting: (1) the Generic Chemical Analysis Form and (2) the Generic Coliform Analysis Form. The Generic Chemical Analysis Form can be used in place of the following paper Report Forms:

- **VOC Form-:** Volatile Organic Contaminants
- **Pb/Cu Form:** Lead and Copper
- **SOC Form :** Synthetic Organic Contaminants
- TTHM Form: Volatile Organic Contaminants(TTHMs)
- **Inorganic Form:** Inorganic Contaminants
- HAA5 Form: Haloacetic Acids

The Generic Coliform Analysis Form can be used to submit individual coliform samples and results, in place of the following Paper Report Forms:

• Bact. Form: Total and Fecal Coliform

• **HPC:** Heterotrophic Plate Count

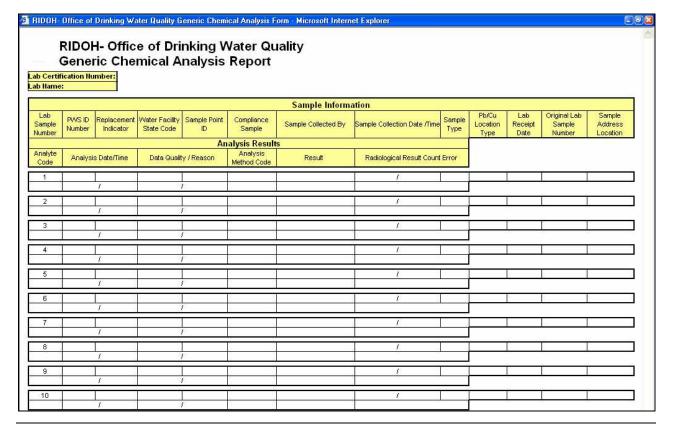
The E2 Reporting System offers a laboratory with four options for submitting Safe Drinking Water Reports electronically:

- **Manual Online Entry:** A user can prepare and submit an electronic report by entering sample / result data into an online entry form on the E2 Reporting System.
- Copy & Paste Entry: A user can prepare data offline in a predefined spreadsheet format and copy the data and paste it into an entry form on the E2 Reporting System.
- XML File Upload: A user can prepare data offline in a predefined XML Schema format and upload the XML file to the E2 Reporting System.
- **Microsoft Excel XML File Generation:** A user can use the Microsoft Excel Template file provided by the E2 Reporting System to prepare data offline. The Microsoft Excel Template file contains a macro which will generate an XML File for you, which can be uploaded to the E2 Reporting System.

5.1.1 Viewing a Blank Safe Drinking Water Report Template

Before a DWR report is made, a user may wish to preview or print the report format for the DWR.

To preview or print a DWR, click on the View icon for the corresponding form type. This will bring up the following read-only screen that displays a blank DWR report.



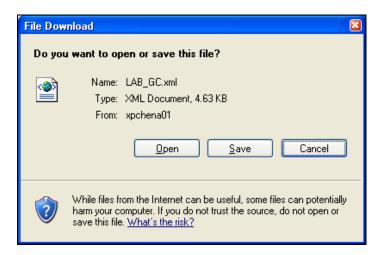


The window displays the DWR in a format that is very similar to the electronic form. The form at this point is considered a *template*, since the actual or measured values for sample and result data are not shown. To print this template, right click on the form and select 'Print'.

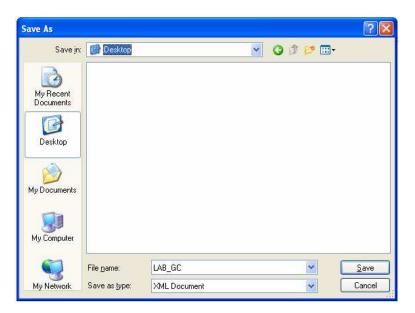
5.1.2 Downloading the Template XML

If the laboratory user wishes to submit data in XML format (perhaps by configuring the LIMS system to export in XML), the use can first download the blank XML template, which provides the required reporting structure for reporting data in XML format

To download an XML template of the DWR file, click on the Download XML icon, the corresponding report. The user will be prompted to download the XML file.



To open the file in a new window without saving, click Open. Alternatively, if you wish to download and save the template DWR XML file, click Save, at which point the user will be prompted to provide the location to save the file.



The next few sections explain how the DWR module of the E2 Reporting System can generate the submission file for the user.

In order to understand any type of message, common definitions and rules must be adopted and enforced, which is where the XML Schema specific to Drinking Water reporting, the e-DWR schema, comes into play. The e-DWR Schema is a definitive list of data elements created by a cross-section of stakeholders, including State Environmental Agencies, Laboratory Representatives, and the US EPA. This schema serves as a national standard for Laboratory-to-State submission of analytical results.

Clicking on the XML icon, allows you to take a peek behind the scenes at the data being displayed. For a detailed discussion about XML please refer to the RIDOH E2RS XML Transmission Protocol

5.1.3 Downloading the Excel Template

If the user instead wishes to download the template file as an Excel file, return to the Create New Reports screen by clicking on the Create New Reports icon in the functional area to the left,



To download an Excel template of the DWR file, click on the Download Excel icon, the corresponding report.

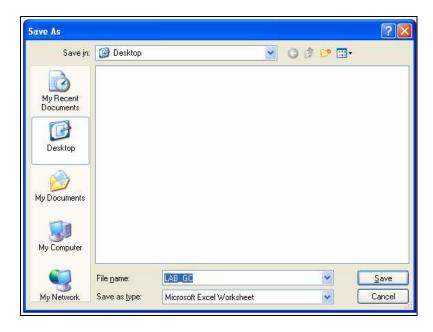
This will begin a series of message boxes.



To open the file in a new window without saving, click Open. Alternately, click Cancel if you do not wish to save or open the file.

However, if you wish to download the template DWR Excel file, click Save, at which point the user will be prompted to respond with the location they wish to save the file in.

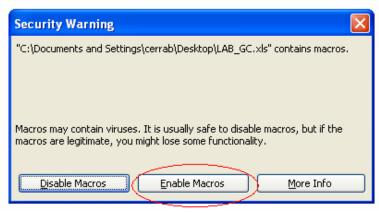




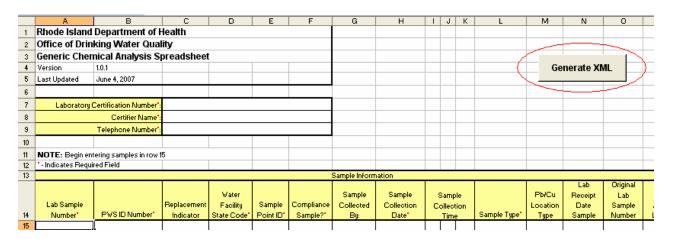
Navigate to the directory where you wish to save the file. Once you have selected a file location and name, click Save

5.1.3.1 MS Excel File Generation

After downloading the template Excel file the user can populate the file with data and use a built in macro to generate an XML file to be used for submission. When opening the Excel file you will be notified that the file contains macros. Click the "Enable Macros" button to continue.



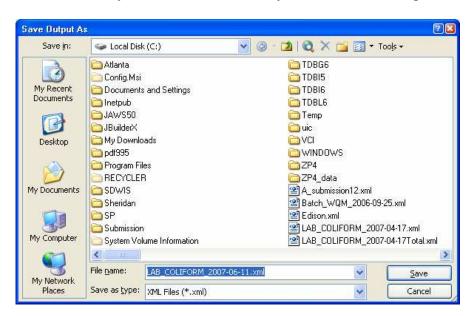
The file will now be opened and you can begin entering data. When you have completed the data entry, click the "Generate XML" button located near cell M3.



The excel file will first be checked to verify that all required fields were entered. If they were not entered, a message window will be displayed notifying you of the fields that have not been filled out. Once all required fields have been entered, click the "Generate XML" button again. You will be asked if you are ready to proceed.



Click the "Yes" button. Next, you will be asked where you want to save the generated file.



Navigate to the directory where you wish to save the file. Once you have selected a file location and name, click the "Save" button. After the file has been generated, a message window will be displayed to notify you that the process finished. Click the "OK" button. Now, this file can be uploaded by following the instructions in the XML File Upload section (Section 5.2).

5.1.4 Using the Web Form to Generate the DWR Submission File

Thus far we have focused on the template XML file. However, many labs may wish to fill out a form very similar to the paper DWR. Using the E2-DWR System, the lab can fill out a web form online to meet this reporting need. Once the web form is filled out, it can be used to generate the submission DWR file populated with the reported data.

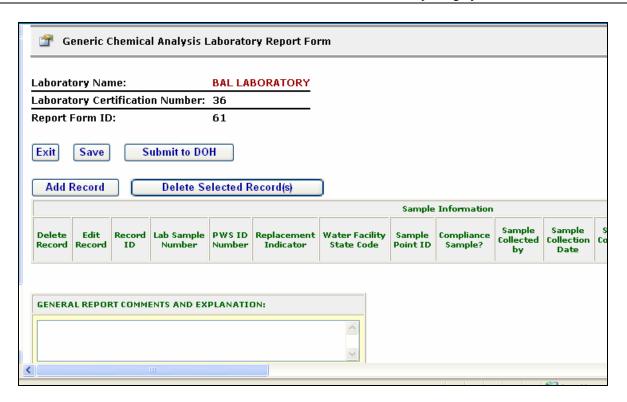
5.1.4.1 Manual Online Entry

To begin, return to the Create New Reports screen, by clicking on the Create New Reports icon in the functional area to the left. The user has two options for online entry, to fill out a form online or to copy and paste information into an online template form.

To fill out an online form manually click on the Entry icon, under the Online Entry header. This will bring up the following pop up window.



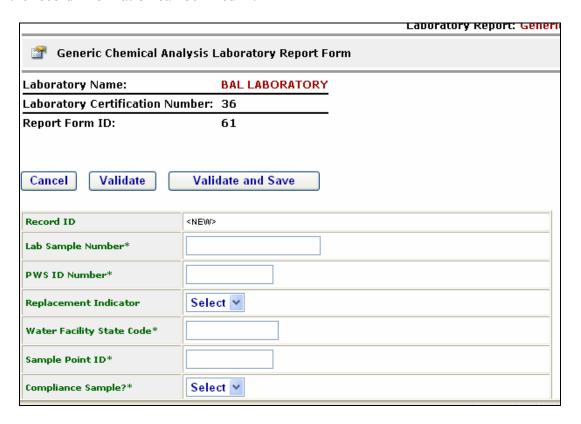
To proceed, click OK. This opens the report form for the user to begin adding information.



To add a record click the Add Record button, all of the record information can be filled in.

Add Record

This opens another page in which



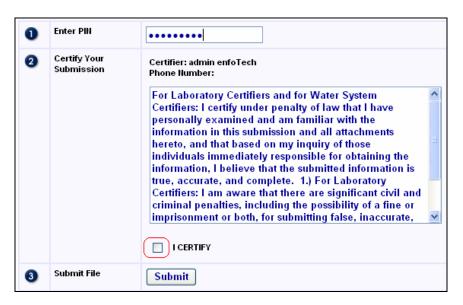
At any point during the data entry the user can click the Validate button to check that the information added to the form abides by the XML schema. Once the user has completed adding the

data, they must click the Validate and Save button. This checks that the data is valid, and saves the record to the report. It should be noted that at any time the user may save the values that have been entered for this DWR and return at a later time, by clicking the Save button, Save.

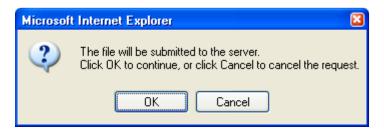
Once the user has completed filling out the form, click the Submit to e-DWR button,

Submit to DOH

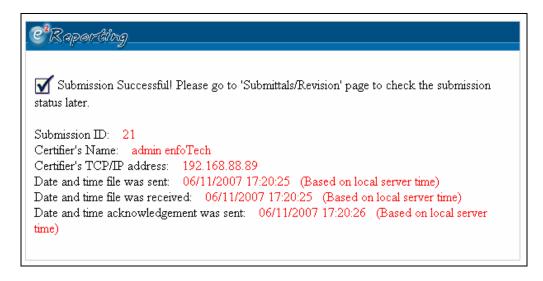
This brings up the submission screen.



The user must enter a PIN and check the "I certify" box before clicking the Submit button.



After hitting Submit, the following screen will appear which provides a confirmation that the submission was made:



The user can click the View Submissions tab to check the status of the report to see if it gets processed or rejected.

5.1.4.2 Copy and Paste

In many cases, a facility may store its daily DWR data electronically in a common spreadsheet software application, such as *Microsoft Excel*. To blend the simplicity of the web form with the commonly used spreadsheet format, there is a copy and paste feature available on the Safe Drinking Water report web forms. To use this feature, return to the Create New Reports screen by

clicking on the Create New Reports icon in the functional area to the left.

Then, click the Copy/Paste icon, Copy/Paste icon

Laboratory Name:	BAL LABORATORY			
Laboratory Certification Number: 36				
Exit Validate Subm	nit to DOH			
Paste data from spreadsheet below: Clear Content Below				

Copying and pasting data allows for standardization of data, reducing the degree of error that may occur by retyping the data. The parameters at the top of locally saved spreadsheet must be in the same order as those on the DWR web form. Once the data is copied into the window, the user can enter comments, if any.

At any point during the data entry the user can click the Validate button to check that the information added to the form abides by the XML schema. Once the user has completed filling out

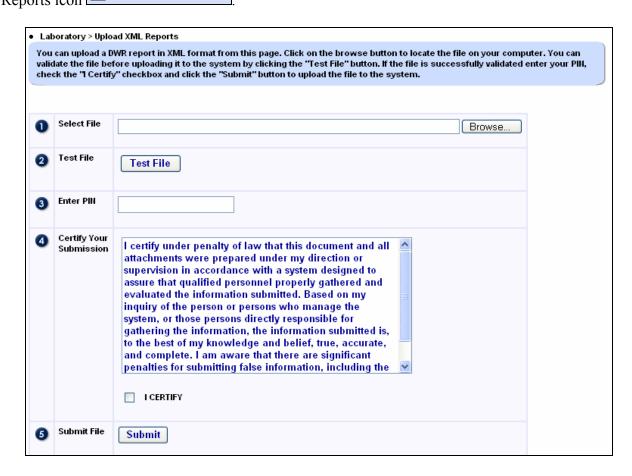
the form, click the Submit to e-DWR button,

Submit to DOH

This will bring the user to the submission page where the user will enter their PIN and certify the report.

5.2 Submitting e-DWR XML Files

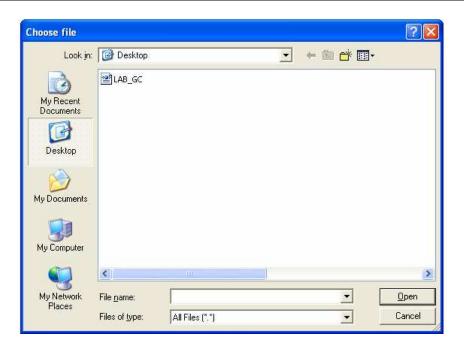
In addition to submitting an e-DWR in the online entry section of the Create New Reports menu, the user can also upload an XML report. This is accomplished by clicking on the Upload XML Reports icon Upload XML Reports.



To select a file, click on the Browse... button.



This will bring up the Choose File message box. Browse through the local file directory, and select the file to be uploaded.



Note that the file selected must be a valid XML file. If the file does not have an .xml extension, an error will occur. Also, the file must generate as an e-DWR schema instance document, and must comply with the naming of the data elements, order of the data elements, and data element type definitions. If the e-DWR schema specifies a date value, it must be in a data element value. If a string is present, an error will occur.

Before submitting the e-DWR XML file, you may test if the file is well formed and validate it against the e-DWR schema. This can be accomplished by clicking the Test File button.



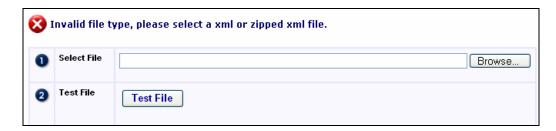
A message box will appear to confirm that the file will be tested at the E2 Server.



Click OK to continue.

If the file is invalid, the specific validation errors will appear above the Select File row. The most common errors are listed below.

(1) The file is not in XML format, for example, the submission file is in word format:



(2) The file did not pass validation:



Click the "here" button to view the error message

```
Line: 37; Column: 37; Message: cvc-enumeration-valid: Value " is not facet-valid with respect to enumeration '[Y, N]'. It must be a value from the enumeration.

Line: 37; Column: 37; Message: cvc-type.3.1.3: The value " of element 'EN:ComplianceSampleIndicator' is not valid.

Line: 40; Column: 37; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 40; Column: 37; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'time'.

Line: 41; Column: 37; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'time'.

Line: 42; Column: 39; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 42; Column: 39; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 60; Column: 28; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 81; Column: 40; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 81; Column: 40; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 81; Column: 40; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 81; Column: 40; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 81; Column: 27; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 81; Column: 27; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

Line: 100; Column: 27; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.

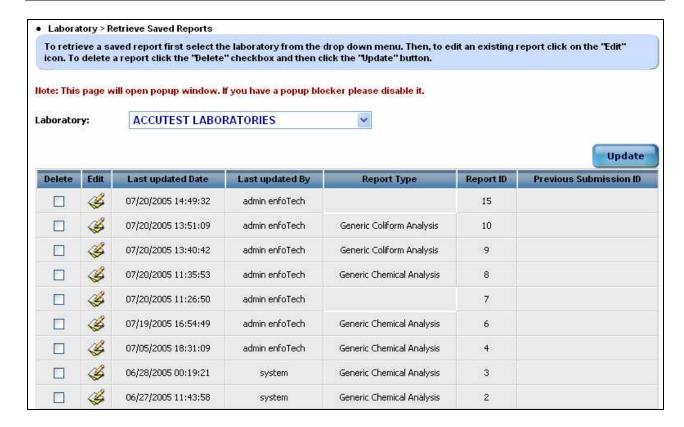
Line: 100; Column: 27; Message: cvc-datatype-valid.1.2.1: " is not a valid value for 'dateTime'.
```

Once a valid XML file has been selected, the user must enter their PIN and certify their submission. To submit the file, click the Submit button.

5.3 Editing or Deleting an Open Report

As stated above in the sections on creating new reports, the user has the option of saving their work at any time during the creation process. To continue work on an open report, click on the Retrieve Saved Reports icon, Retrieve Saved Reports located in the functional area to the left.





5.3.1 Editing an Open Report

To edit a report select a laboratory from the drop down menu, then find the desired report. To edit the report click on the Edit icon . This will open the report. To make changes follow the steps for creating a report in section 5.1.

5.3.2 Deleting an Open Report

A report can be deleted by checking the delete check box next to the appropriate report,





To delete the report, click OK.

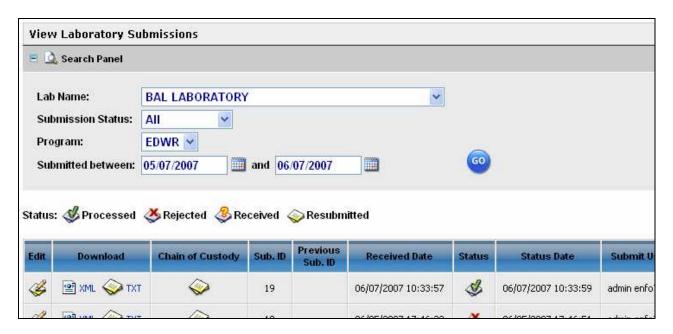


Delete

V

5.4 Viewing Submissions

After a file has been submitted to the E2-DWR Server, it is accessible for viewing at any time. To view a DWR submission, click on the View Submission icon, View Submission in the left functional area. This will open the following screen.



To find a particular submission select the Lab from the drop down menu. The user can also search based on the submission status, program (EDWR or PWTA), and submission date. One of the search criteria is Submission Status, these statuses are described below:

- **Received**: A submission with "Received" status has been received by the E2 Reporting System, but has not yet been validated.
- **Rejected**: A submission with "Rejected" status has been received by the E2 Reporting System, and was validated. However, errors where detected when validating the submission.
- **Processed**: A submission with "Processed" status has been received by the E2 Reporting System, and was validated with no errors detected. Only sample / results contained within "Processed" submissions will be moved into SDWIS/State.
- **Resubmitted**: A submission with "Resubmitted" status was originally rejected by the E2 Reporting System, but a new submission was made to correct the errors.

5.4.1 Edit Rejected Submissions

From this page, any submissions that were given the Rejected status can be edited by clicking on the Edit icon

5.4.2 Download XML file

This page also allows the user to download the XML submission file by clicking on the XML icon.

This will bring up the following message box.

enfoTech



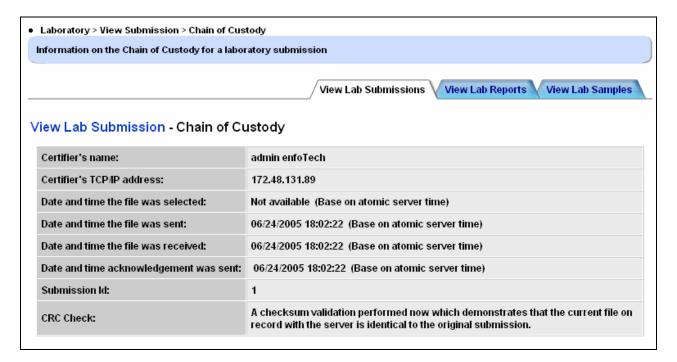
To open the file in a new window without saving, click Open. Alternately, click Cancel if you do not wish to save or open the file.

However, if you wish to download the XML submission file, click Save, at which point the user will be prompted to respond with the location they wish to save the file in.

5.4.3 Chain of Custody

The Chain of Custody can be obtained for the submission by clicking on the Chain of Custody icon

This will bring up a screen displaying the Date/Time of the submission and the Submission ID.



5.4.4 Viewing Reports within a Submission

To view the reports within a submission, click the "View Lab Reports" tab at the top right of the page.

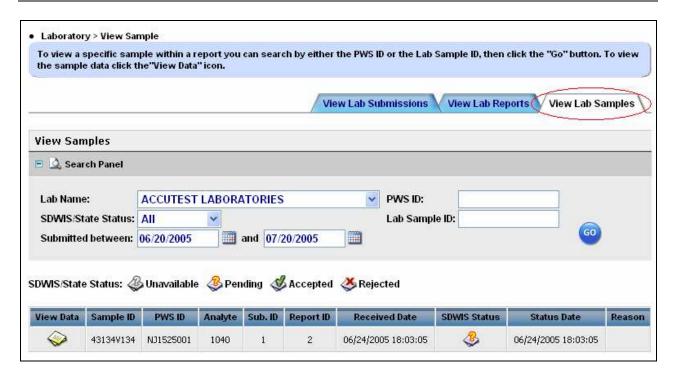


To find a particular report select the Lab from the drop down menu. The user can also search based on the submission status, report type, and submission date. To view the report, click the View icon . This launches a new window which displays the report.

5.4.5 Viewing Samples within a Report

To view the samples within a submission, click the "View Lab Samples" tab at the top right of the page.

enfoTech

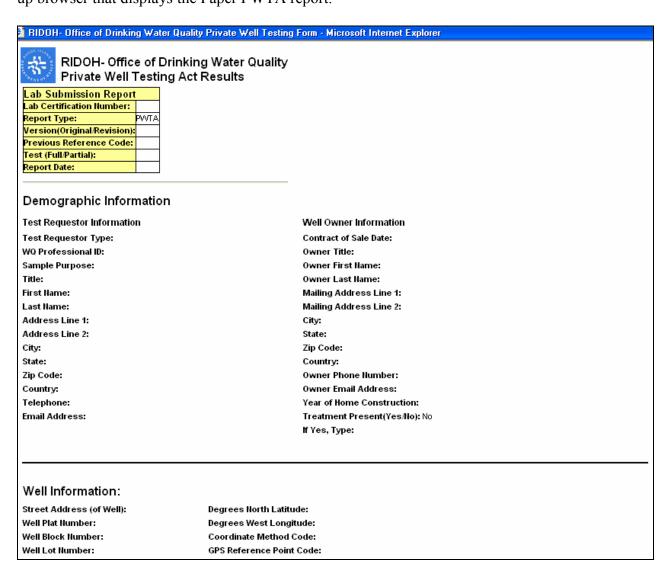


To find a particular sample select the Lab from the drop down menu. The user can also search based on the SDWIS/State status, PWIS ID, Lab Sample ID, and submission date. To view the data, click the View icon . This will open a window displaying the sample data.

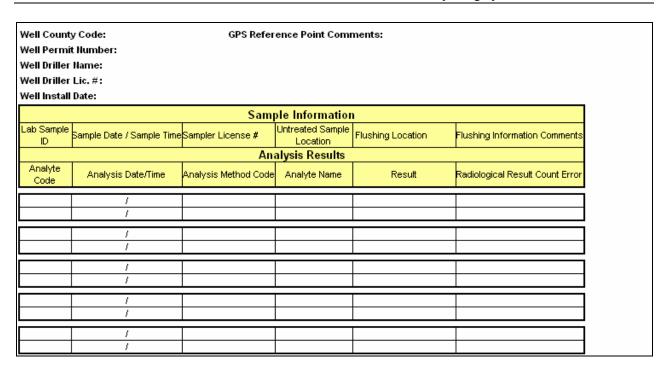
6 PWTA Reporting (Private Drinking Water Reports)

6.1 Viewing a Blank PWTA Report Template (Optional)

Before a PWTA file is generated, a user may wish to preview and print out a blank PWTA reporting form, as shown on their paper PWTA report. To preview or print a PWTA report, click on the View icon view for the corresponding form type. This will bring up the following popup browser that displays the Paper PWTA report.







To print this template, right click in the center of the page and select print.

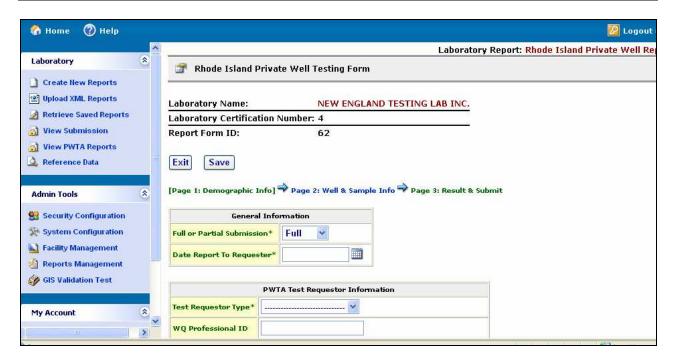
6.2 Submitting Using the Online Web Form

To begin, return to the Create New Reports screen, by clicking on the Create New Reports icon in the functional area to the left.

To fill out an online form, click on the Entry icon, under the Online Entry header. This will bring up the following pop up window.



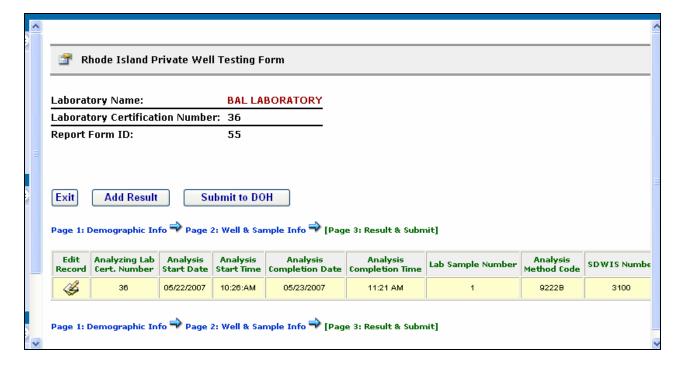
To proceed, click OK. This opens the report form for the user to begin adding information.



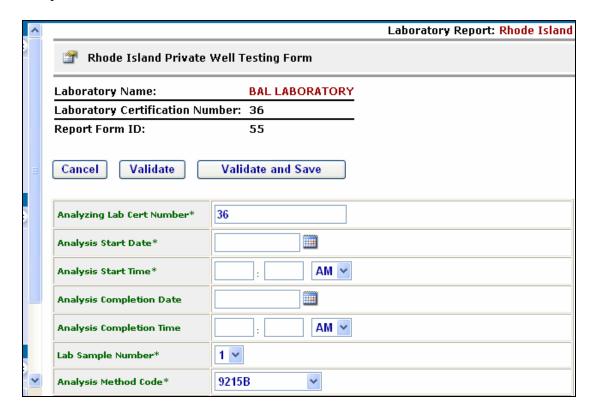
This online entry form is broken up into three separate pages:

- Page 1: Demographic Info. This page contains PWTA requester information and Property information.
- Page 2: Well & Sample Info. This page contains Well information and Sample Collection information.
- Page 3: Result & Submit. This page contains all of the lab analysis results for each sample.

Before moving on from one page to the next, all required information must be entered and validated.



Once the user has entered all the necessary Demographic, Well, and Sample information they will need to enter the Lab results for each analyte on Page 3. To do this, click the "Add Result" button. This will open a new screen to enter the lab results.



At any point during the data entry the user can click the Validate button to check that the information added to the form abides by the XML schema. Once the user has completed adding the data, they must click the Validate and Save button. This checks that the data is valid, and saves the record to the report.

Once the user has completed filling out the form, click the button located on Page 3. It should be noted that at any time the user may save the values that have been entered for this report on Pages 1 and 2 and return at a later time, by clicking the Save button, Save.

6.3 Submitting Using Microsoft Excel

Many laboratories may wish to use Excel to fill out their PWTA reports. The user can download a blank Excel template and then fill out their PWTA reports in Excel. When they are done filling out the report, they can click a button to convert the file to XML format, then upload the XML file to E2. This reporting option has the following Pros and Cons:

Pros:

- Can be faster to fill out reports when compared to Online webform entry option
- Immediate feedback on some validation errors

- No need to have knowledge of XML
- Laboratory can choose to integrate with their LIMS system (based on laboratory's internal efforts)
- Follow simple wizard to submit reports

Cons:

- Do not get immediate feedback on all validation errors.
- If Excel template changes, laboratory will need to make sure it is always using the latest template format
- Requires laboratory to have a licensed copy of Microsoft Excel

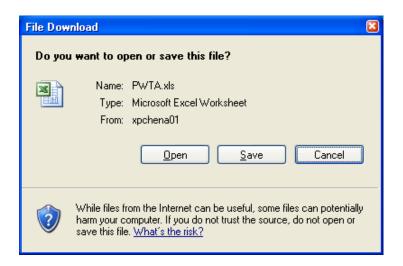
If you choose to submit your PWTA reports using the Excel option, please follow the instructions in this section.

6.3.1 Step 1: Downloading the Excel Template

If the user instead wishes to download the template file as an Excel file, return to the Create New Reports screen by clicking on the Create New Reports icon in the functional area to the left,



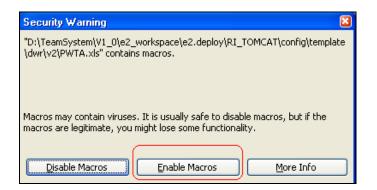
To download a template PWTA file, click on the Excel icon, for the corresponding report. When prompted, click the Save button and select the local directory to which you wish to save the Excel file.

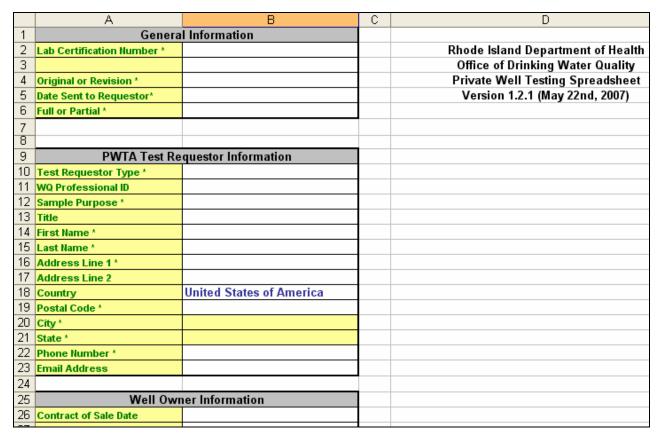




6.3.2 Step 2: PWTA Submission Generation using Excel

After downloading the template Excel file the user can populate the file with data and use a built in macro to generate an XML file to be used for submission. When opening the Excel file the user will be notified that the file contains macros. Click the "Enable Macros" button to continue.





NOTE: Before filling out the Excel template file, be sure that you are using the most up to date version. The version number can be found in cell D5 on the first worksheet in the template file. The file may be updated periodically and posted on the E2-PWTA website.

Like the web form, the Excel template file is divided into 3 sections: (1) Demographic Information, (2) Well and Sample Information, and (3) Results.

Page 1 and 2

To complete these sections of the form simply fill in the required information. Some fields will have pre-populated dropdown boxes for the user to make selections from an approved list of responses. For any address on page 1 that is inside the United States, the user will not be able to fill out the City or State fields as they can only be populated by entering the Postal Code. If the country is other than the United States of America, the user will have access to the City and State fields.

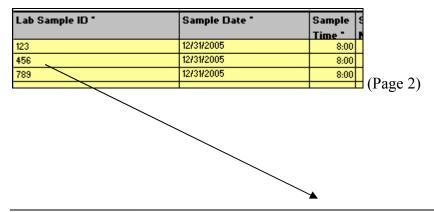
County/Municipality Selection

To enter the county and municipality codes on page 2 (cells B7 and B8) first select the county from the dropdown list, this will automatically update the dropdown list for the municipality (NOTE: If the County is later changed, the municipality will also need to be updated).

	A	В	С		
1	Page 2: Well Location & Sample Information				
2	Physical Well Location Information				
3	Street Address (of Vell) "				
4	Vell Plat Number "				
5	Vell Block Number **				
6	Vell Lot Number "				
7	Vell County Code "				
8	Vell Town Code "		₹		
9	Vell Permit Number	First Select a County			
10	Vell Driller Name				
11	Vell Driller Lic. #				
12	Vell Install Date				
13	Latitude "				
	1111				

Lab Sample

On page 2 Sample information is entered in the second box on the page. This information will later be referenced by each sample result on Page 3. The Lab Sample ID's that are entered in page 2 will be used to populate a dropdown list on page 3 as shown below:





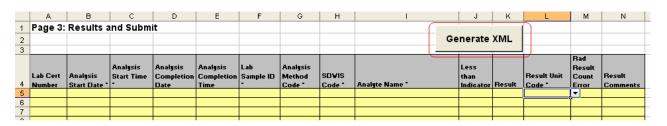
Lab Cert Number	Analysis Start Date	Analysis Start Time	Analysis Completion Date	Analysis Completion Time	Lab Sample ID	М	alysis ethod ode	
					123 456 789			(Page 3)

Page 3

All lab results are entered on Page 3.

Generate XML

Once all the data has been entered and the user is ready to generate an XML file, they will press the "Generate XML" button on Page 3.



The user will be asked if they are ready to proceed.

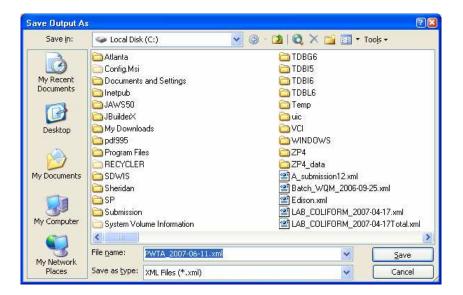


Click the "Yes" button.

If all of the required information was not provided the macro will generate an error message indicating which required fields were omitted.



If all of the necessary information has been provided, the user will be asked where they want to save the generated file.



Click the "Save" button. After the file has been generated, a message window will be displayed to notify the user that the process finished.



Click the "OK" button. Now, this file can be uploaded by following the instructions in the XML File Upload section (Section 5.2).

6.4 Submitting Using XML Template

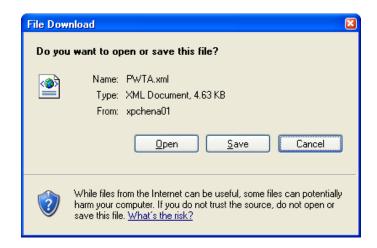
If the laboratory wishes to configure their LIMS system to automatically output PWTA submissions in the XML format, they can use this submittal option.

6.4.1 Step 1: Downloading the Template XML (Optional)

The laboratory can choose to download a blank template file. To do this, return to the Create New Reports screen by clicking on the Create New Reports icon in the functional area to the Create New Reports

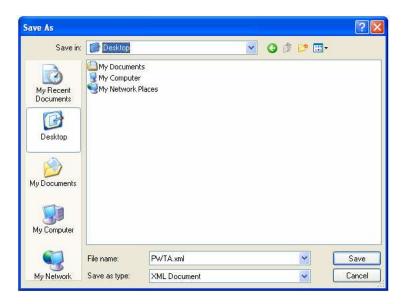
To download an XML template of the PWTA file, click on the Download XML icon, This will begin a series of message boxes.





To open the file in a new window without saving, click Open. Alternately, the user can click Cancel if they do not wish to save or open the file.

However, if the user wishes to download the template PWTA XML file, click Save, at which point the user will be prompted to respond with the location they wish to save the file in.



Navigate to the directory where the file should be saved. Once you have selected a file location and name, click Save. After the laboratory's LIMS system has populated the template file or otherwise generated an XML file in the correct format for PWTA, the user can follow the steps in section 5.2 to upload the file into the system.

6.5 PWTA Viewer user type

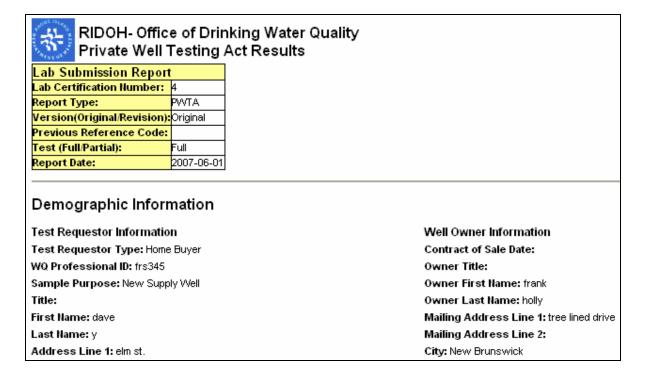
For PWTA there is a special user type that can only see the View PWTA Reports tab. Interpreters, Building Officials, and Water Quality Professionals would have a 'Viewer' user type.



Clicking the View PWTA Reports brings up a search screen that allows a user to search by the lab name, Submission status, County, Municipality, and submission date.



The user can see a report by clicking on the View icon,



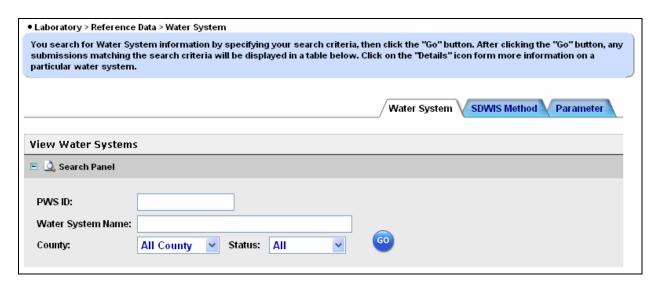


This user type is unable to download the xml data behind the report and can only view reports with a status of "submitted" or "resubmitted".



7 Reference Data

The user can obtain a listing of what water facilities are associated with a particular water system, as well as, the status of the facilities and system, by clicking the Reference Data icon, in the functional area to the left. From this screen the user can also obtain information regarding the SDWIS Method as well as related parameters, by clicking on the appropriate tabs located in the upper section of the screen.



7.1.1 Water System Information

To find information regarding a water system first enter the appropriate search criteria.



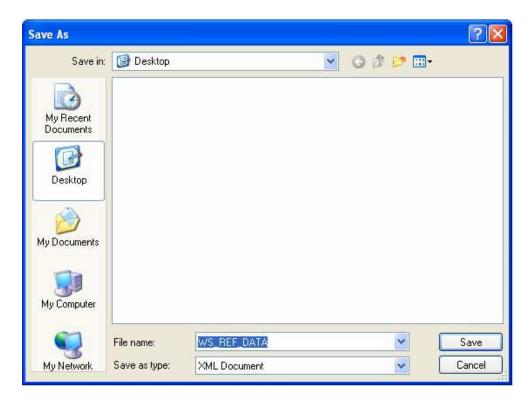
To download the data for each system returned by the search click the Download Data button

Download Data . This will begin a series of message boxes.



To open the file in a new window without saving, click Open. Alternately, click Cancel if you do not wish to save or open the file.

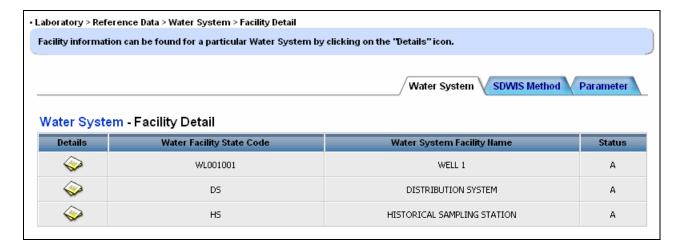
However, if you wish to download the water systems' XML data file, click Save, at which point the user will be prompted to respond with the location they wish to save the file in.



Navigate to the directory where you wish to save the file. Once you have selected a file location and name, click Save.

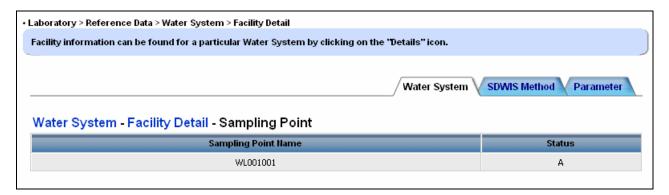
To view the water facilities associated with a water system click the Details icon, [See April 2017], for the water system of interest.





This screen displays a listing of the water facilities associated with the particular system, as well as, their status. To view information regarding a facility's sampling point click the Details icon,

for the water facility of interest.



7.1.2 SDWIS Method

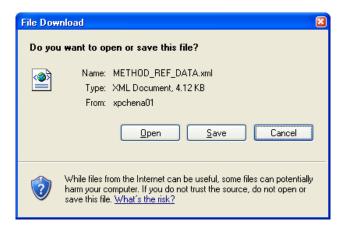
To find information regarding a SDWIS Method click on the SDWIS Method tab from the Reference Data screen, then enter the appropriate search criteria. (Note: details of a method can be found by searching a parameter from the Parameter tab (See section 7.1.3), and then selecting to view the methods related to the particular parameter, this action will bring the user to the SDWIS Method tab, as if they had performed a method search.)



To download the data for each method returned by the search click the Download Data button

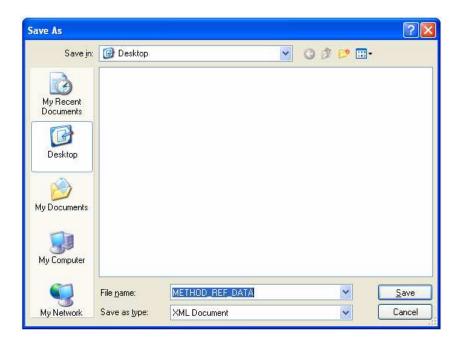
Download Data

This will begin a series of message boxes.



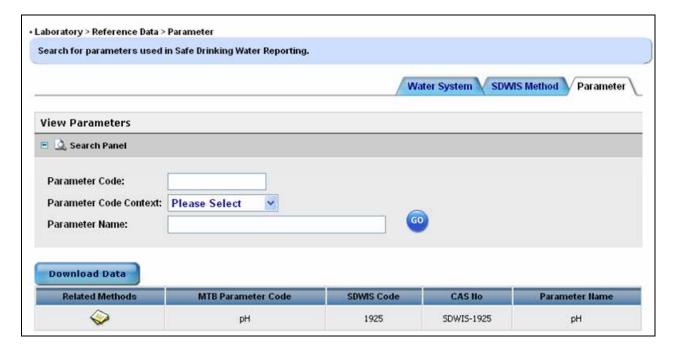
To open the file in a new window without saving, click Open. Alternately, click Cancel if you do not wish to save or open the file.

However, if you wish to download the SDWIS method XML data file, click Save, at which point the user will be prompted to respond with the location they wish to save the file in.



Navigate to the directory where you wish to save the file. Once you have selected a file location and name, click Save.

To view the parameters related to the method click the Details icon, , for the method of interest. This will action will transfer you to the Parameter tab located at the top of the screen.



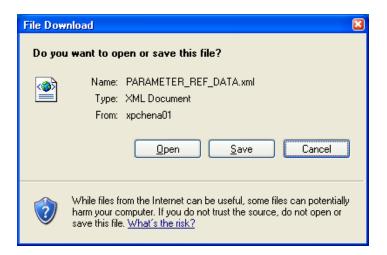
7.1.3 Parameter Search

To find information regarding a Parameter click on the Parameter tab from the Reference Data screen, then enter the appropriate search criteria. (Note: details for a parameter can be found by searching a method from the SDWIS Method tab (See section 7.1.2), and then selecting to view the parameters related to the particular method, this action will bring the user to the Parameter tab, as if they had performed a parameter search.)



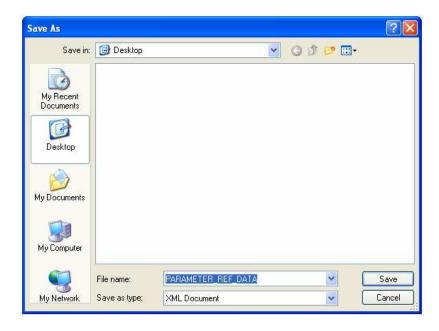
To download the data for each parameter returned by the search click the Download Data button.

Download Data . This will begin a series of message boxes.



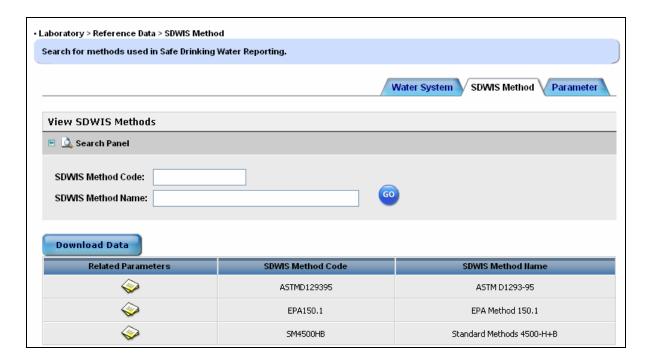
To open the file in a new window without saving, click Open. Alternately, click Cancel if you do not wish to save or open the file.

However, if you wish to download the parameter XML data file, click Save, at which point the user will be prompted to respond with the location they wish to save the file in.



Navigate to the directory where you wish to save the file. Once you have selected a file location and name, click Save.

To view the methods related to a particular parameter click the Details icon, if the parameter of interest. This will action will transfer you to the SDWIS Method tab located at the top of the screen.



8 Glossary

Term	Definition
Administrator	 User Account Level which has the following privileges: Allowed to download, prepare, upload, review, and certify the accuracy of electronic reports. Allowed to submit electronic reports to the state agency. If the user's account is associated with a laboratory the user will have the following additional privilege: Allowed to approve or deny requests from others requesting to be
	associated with the laboratory. If the user's account is associated with a water system the user will have the following additional privileges:
	 Allowed to approve or deny requests from others requesting to be associated with the water system. Allowed to view laboratory reports submitted on behalf of the water system. Allowed to manage which laboratories may submit electronic Drinking Water Reports on the behalf of the water system.
Certifier	 User Account Level which has the following privileges: Allowed to download, prepare, upload, review, and certify the accuracy of electronic reports. Allowed to submit electronic reports to the state agency. If the user's account is associated with a water system the user will have the following additional privilege:
DWD	Allowed to view laboratory reports submitted on behalf of the water system.
DWR E2	Drinking Water Reports Rhode Island Department of Health Electronic Environmental Reporting System. A web-based information system that allows laboratories and the regulated community to electronically submit reports to the Rhode Island Department of Health.
Electronic Signature Agreement	Serves as a formal agreement between each PIN holder (Certifier) and the Department regarding the responsibilities and use of their PIN
Personal Identification Number (PIN)	A sequence of alpha-numeric characters assigned to a Certifier by RIDOH which provides an "electronic signature" for the certifier.



Term	Definition
Preparer	 User Account Level which has the following privileges: Allowed to download and prepare electronic reports. Allowed to view electronic reports and past submissions, but not certify or upload any submissions.
	If the user's account is associated with a water system the user will have the following additional privilege:
	Allowed to view laboratory reports submitted on behalf of the water system.
PWTA	Private Well Testing Act
RIDOH	Rhode Island Department of Health
SDWIS/State	Safe Drinking Water Information System State version: RIDOH's database used to manage the Safe Drinking Water Act
Submission ID	A unique number generated by E2 and assigned to each submission.
Viewer	 User Account Level which has the following privileges: Allowed to view electronic PWTA reports, but not download or upload any submissions.
XML	Extensible Markup Language (XML) is a recommended standard by World Wide Web Consortium (W3C) for generic data communication (http://www.w3.org/TR/2000/REC-xml-20001006).
XML Schema	Defines the data element names, definitions, order, required fields, and data types for all elements in an XML file.

